THE SOURCE

NEWSLETTER OF THE NHDES DRINKING WATER SOURCE PROTECTION PROGRAM FALL 2000

Over $350,000 in Grant Money Available For Water Protection

Grant Proposals for watershed and drinking water protection projects due November 20

DES is pleased to announce the availability of 2000/2001 Local Water Protection Grants for Watershed and Drinking Water Protection Projects. Approximately $366,000 worth of funding is available to develop and implement programs to protect sources of public drinking water and identify and address nonpoint source pollution in order to protect watersheds.

Drinking water protection grants will be awarded for the protection of active sources of public water supplies. Funds can be used to cover all aspects of source water protection: delineation, assessment, and implementation. These grants have a limit of $15,000, and, while any matching funds strengthen a proposal, they are not required.

Nonpoint source protection grants generally cover a much broader range of projects, including organization building for watershed protection, water resource protection planning, and implementation of water resource management plans such as best management practices and education and outreach programs. These grants have no monetary limit but require a 40% match.

Application packets for these grants are now available by contacting Johnna McKenna at 271-7017 or jmckenna@des.state.nh.us or on the web at www.des.state.nh.us/dwspp/grants.htm The proposal deadline is November 20, 2000.

$1.5 Million Grant For Land Purchases

The Water Supply Land Grant Program is another opportunity to obtain grant funds, these aimed at protecting critical water supply lands. Grants are available for municipalities or non-profit water suppliers for the purchase of land or conservation easements critical to their water quality. The water supply lands must be within the source water protection areas for existing or planned public drinking water sources. DES has $1.5 million for grant making during the first year of the program.

The grants must be matched 75% from local sources. These match sources can include donated land or easements that also lie within the source water protection areas, public funds, transaction expenses, or private funds. There is a low interest loan fund available from DES to help communities finance some or all of the match.

The Eligibility Applications for the first grant round are due November 1, 2000. (Note: this has been extended from the previous due date, to provide additional time for communities to apply).

The Society for the Protection of NH Forests and DES staff are available to assist in the application process. For more information about the program contact Sherry Godlewski at 271-0688 or sgodlewski@des.state.nh.us.

Water Conservation: The Next Frontier for DES

As the State experiences robust growth in population and, even more dramatically, in water usage, DES has identified water conservation as a key priority. To tackle this issue, DES has formed a Water Conservation Working Group (WCWG) to lay the groundwork for state policies involving water conservation. The group's first task is to determine the water use characteristics of different water users in the state.

The WCWG has made significant progress during its first meetings. The group has developed a Water Efficiency Survey that will be sent to all types of water users in the State. The purpose of this survey is to identify the existing state policies or regulations that encourage or discour-

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Spotlight on... Swanzey

Groundwater Protection Built on an Informed Citizenry

Swanzey is typical of many New Hampshire towns lying just outside a regional population center. Located just south of Keene and with a population of approximately 6,000, Swanzey is traversed by three north-south state highways lined with commercial development, including a number of automotive sales and service businesses and a small airport. About one-seventh of the population is served by a handful of small community water systems.

Anticipating growth from planned highway improvements, and viewing the town's groundwater as an invaluable resource, several residents volunteered to form an Aquifer Protection Task Force. With membership including the Planning Board and Conservation Commission, the Task Force began in 1995 with aquifer delineation and mapping, preliminary surveys of potential contamination sources (PCSs), and a review of measures that other communities in the state had instituted to protect water resources. With a 1998-1999 grant from NHDES, the Task Force contracted with an individual to conduct a detailed and more extensive PCS inventory, which included interviews with each PCS owner/operator and fixing the location of each PCS with a Global Positioning System (GPS) receiver borrowed from Monadnock Regional High School. The inventory contractor provided each business in the town with copies of best management practices fact sheets. Over 160 businesses were contacted, and over 60 were inspected for compliance with DES's best management practices (BMP) rules. The Task Force then worked with seven water supply systems in town to develop a highly informative flier (covering the importance of groundwater, potential contamination sources, and best management practices for businesses and residences) and distributed the flier to all residences in town. The education effort included a 4 x 8 ft display presented at Town Meeting and in Town Hall.

Having done the groundwork to build public support for groundwater protection, the Task Force is now working with data on quantities of regulated substances and levels of BMP compliance. The Task Force plans to use the data to make the case for a local regulatory program that would repeat the inspections of PCS businesses every three years and enforce the BMP standards.

For more information about Swanzey's program, contact Task Force members Debbra Crowder at 352-0644 or Richard Scaramelli at 352-2762.

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age water conservation, and to collect information for use in developing a long- term water conservation strategy. The questionnaires are expected to be distributed to water users this fall.

The WCWG is also developing water conservation provisions that will be incorporated into Instream Flow Rules. The group will also support DES and the Public Utilities Commission in developing a report to the legislature evaluating whether existing regulatory structures encourage or discourage regional cooperation for water resources management and conservation.

If you have any questions or would like to participate in the Water Conservation Working Group, contact Brandon Kernen at 271-0660 or bkernen@des.state.nh.us.

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Closer To Home

Information for well owners and public water system customers

DES Calls for More Voluntary Testing of Private Wells

In light of increasingly stringent federal and state limits for contaminants in public drinking water systems, NHDES is calling on private well owners to voluntarily test their water more frequently and for a wider range of contaminants. Approximately 35% of New Hampshire's population (about 425,000 people) obtain drinking water from around 200,000 private residential wells, a number which grows by about 4,000 wells per year.

No Current Requirements

At present, private well water is rarely tested, except when properties are sold or a change in taste, odor, or color raises suspicions about water quality. New Hampshire has no State requirements for the testing of private wells, although the law (RSA 477:4-c) requires that certain information concerning a home's water system be disclosed to a purchaser, including an unsatisfactory water test. ("Unsatisfactory water test" is not defined.) The Veterans Administration (VA), Federal Housing Administration (FHA), and many banks require some water quality testing when writing a mortgage. However, their requirements are not consistent, and historically there has been more emphasis on aesthetic contaminants rather than health-related contaminants. Some towns, however, do have private well testing requirements.

Even when a private well is tested, the analyses often do not include all of the contaminants with significant health implications which are expected to occur in a substantial number of wells. The naturally occurring contaminants of concern include arsenic, fluoride, radon, and other radionuclides. Other contaminants, caused by human activities, are industrial solvents, petroleum products and fuel additives [such as benzene, toluene, ethylbenzene, xylene and methyl-t-butyl ether (MtBE)], and lead and copper from plumbing. Bacteria in wells may be from either natural or human sources but typically enter wells because of poor construction.

Many Homes Likely to Have Contaminants Exceeding Standards

Federal and state maximum contaminant limits (MCLs) for drinking water apply to public water systems; they do not apply to private wells. Nevertheless, DES estimates that most private wells (about 53%) exceed the "action level" of 2,000 picocuries of radon per liter (pCi/L) recommended by the NH Department of Health and Human Services and 95% exceed the proposed federal radon MCL of 300 pCi/L! About 20% of private wells are expected to exceed the proposed federal MCL of 5 micrograms per liter (ug/L) for arsenic, and 1% are expected to exceed federal MCLs for volatile organic compounds. Because so few private well owners test their water, many are likely to be unaware that they are drinking water that exceeds these health-based standards.

When should private wells be tested?

DES recommends the following:

1. When a well is first drilled.
2. At least once every 3 to 5 years for all wells.
3. At the time of all real estate transactions.
4. If obvious changes in water quality (such as changes in taste, odor or color) are noticed.

Analysis for specific contaminants should be performed more frequently if they are known to be present at elevated levels.

What Is The "Basic" Analysis That Should Be Done For Private Wells?

DES recommends the following analyses, which cost approximately $235 at the DES laboratory: arsenic, bacteria, radon, alpha screen, volatile organic compounds, lead, copper, nitrate, nitrite, fluoride, pH, sodium, chloride, iron, manganese, and hardness.

DES Getting the Word Out

DES is working with professionals in the drinking water, local public health, water well, real estate, and financial sectors to ensure that a consistent message is delivered to consumers on the importance of residential well water quality testing and treatment. This fall, DES will also begin to erect displays in key locations, such as home shows and participating retail outlets for water conditioning equipment or plumbing fixtures.

For more information about DES's private well outreach strategy, please call 271-3139.

For additional information please see the many private well educational fact sheets at www.des.state.nh.us/wseb/.

Bedrock Lineament Maps Are Now Available

In a cooperative effort, DES and the US Geological Survey recently finished 14 bedrock lineament maps that cover all of New Hampshire. Experts can use these maps, along with other tools, to identify an area that may be worth pursuing as a new bedrock water supply well site and to help define its protection area.

The new maps show linear features, called lineaments, seen on aerial photographs and satellite images from different elevations above the earth. Such linear features can be caused by, among other things, large cracks, called fractures, in the underlying bedrock. Water is stored in certain fractures and experts can use the new maps as an aid in identifying fractures and in choosing a location for further investigation as a new bedrock water supply well site.

Water that moves down through the land surface will flow along certain fractures to reach and supply water to a bedrock well. Where this happens, the land area that supplies water to the fracture supplies water to the well. Once identified, water suppliers can manage this land to protect their water supply. In the example at left, DES used the information presented on the new lineament maps, along with site-specific information, to refine a circular protection area for a bedrock wellfield.

If you would like to find out more about the maps, please contact Rick Chormann at 271-1975 or rchormann@des.state.nh.us. If you would like to know more about using the maps to identify protection areas for water supplies, please contact Judy Maloney at 271-3303 or jmaloney@des.state.nh.us. If you would like to purchase maps for your area, contact DES's Public Information Center at 271-2975.

A protection area for a bedrock water supply well refined with the aid of information presented on the new bedrock lineament maps.

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